

1,3-Butadiene Trend Analyses Houston East End

Milby Park Monitor

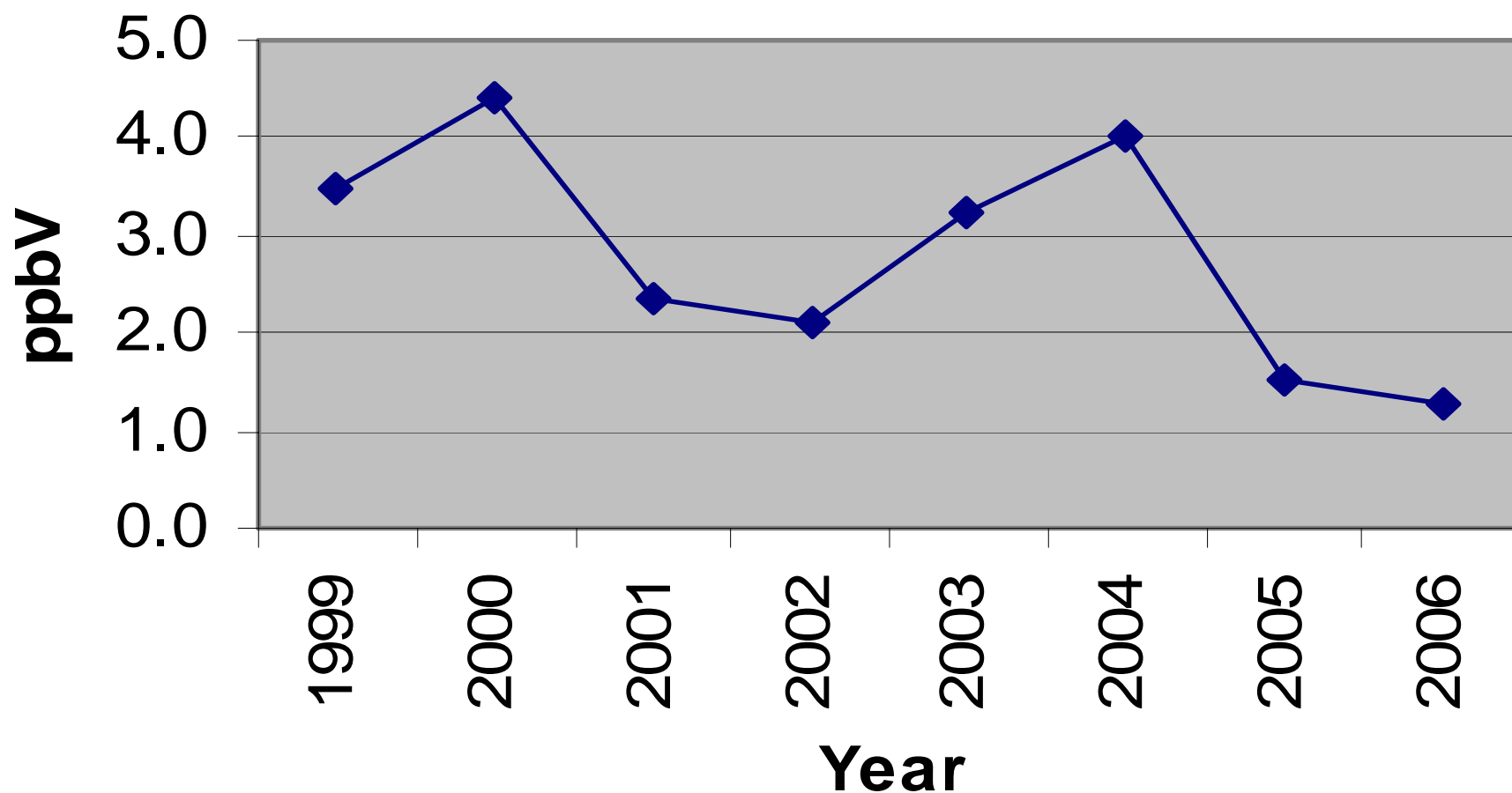
Cesar Chavez High School Monitor

Clinton Monitor

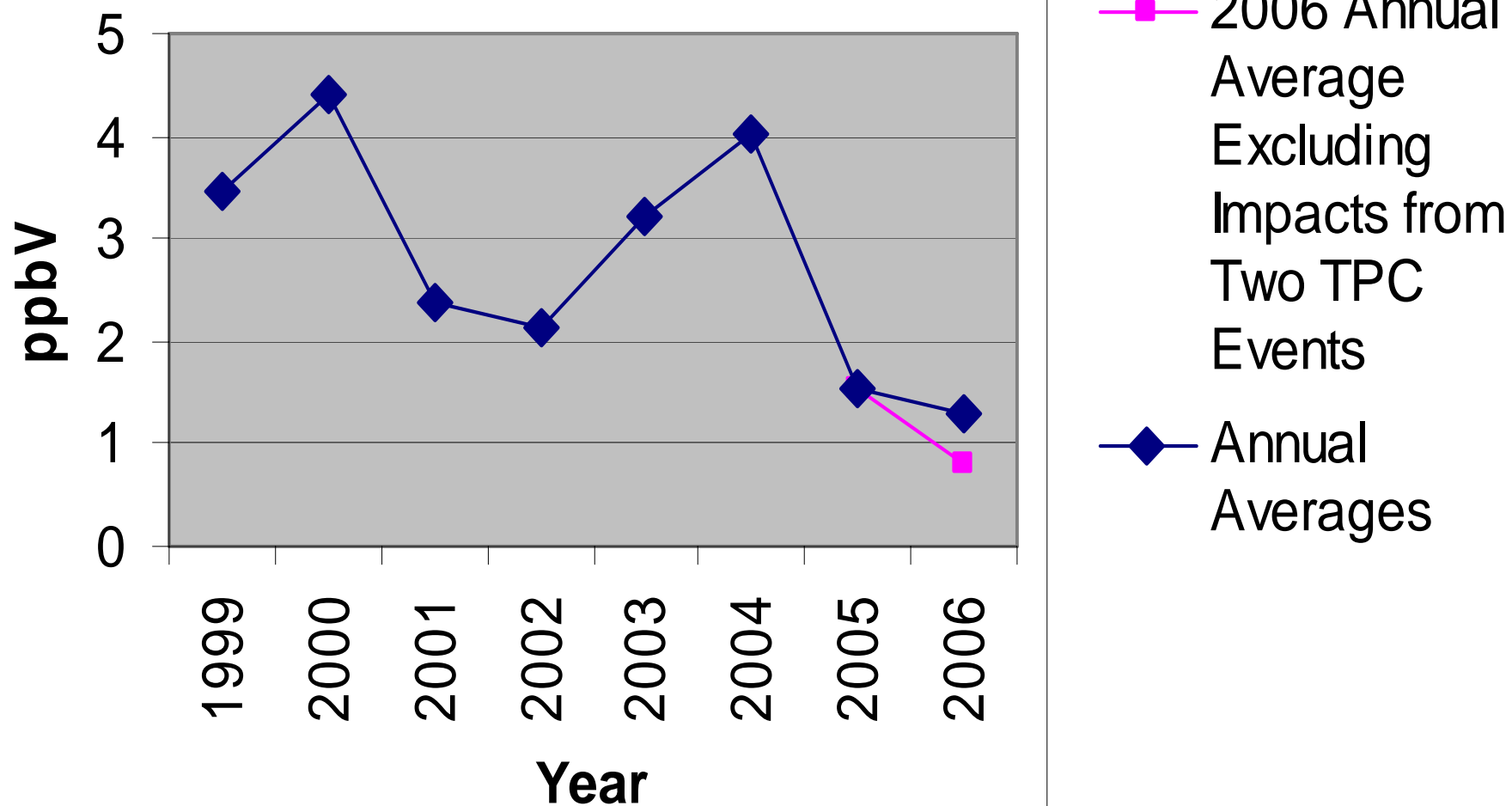
Milby Park Monitor

- TPC is located approximately 1/3 of a mile Southeast of the Milby Park Monitor.
- The Milby Park Monitor utilized a canister, every sixth day from April of 1999 until December of 2004.
- The Milby Park Monitor has utilized an Automated Gas Chromatograph since February 2005

Milby Park Monitor 1,3-Butadiene Annual Averages

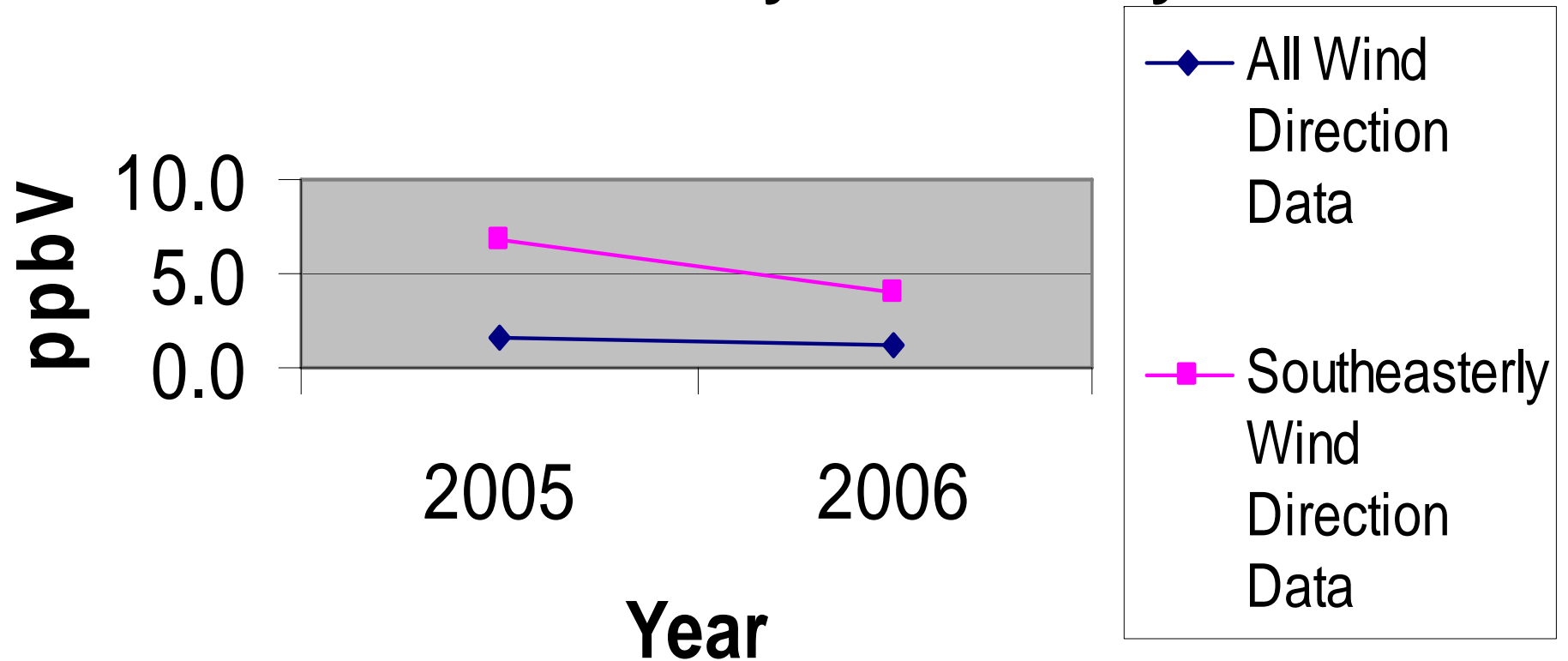


Milby Park Monitor 1,3-Butadiene Annual Average Concentrations



Milby Park Annual Average 1,3-Butadiene Concentrations

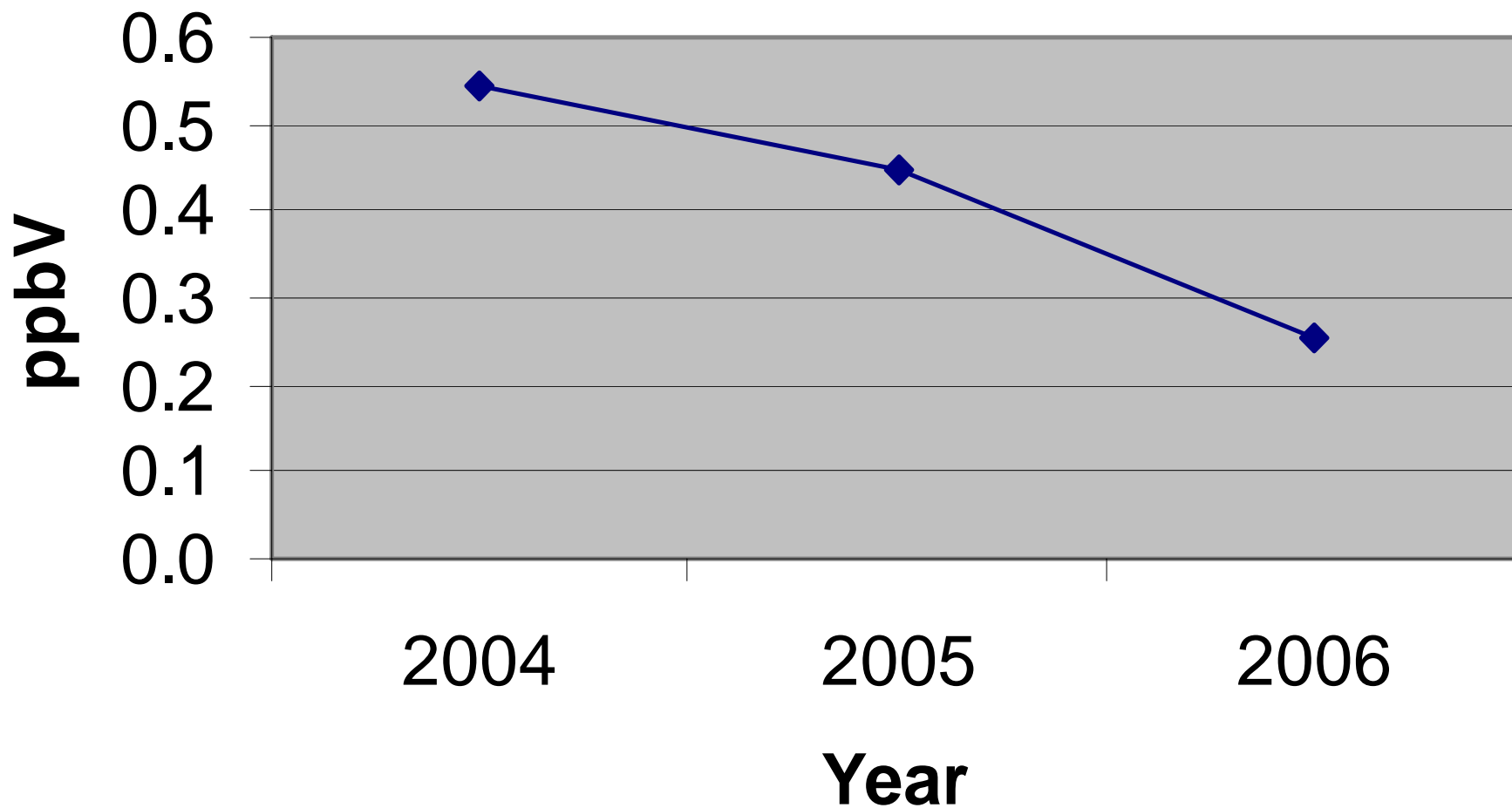
All Wind Directions Compared to Southeastern Winds Only



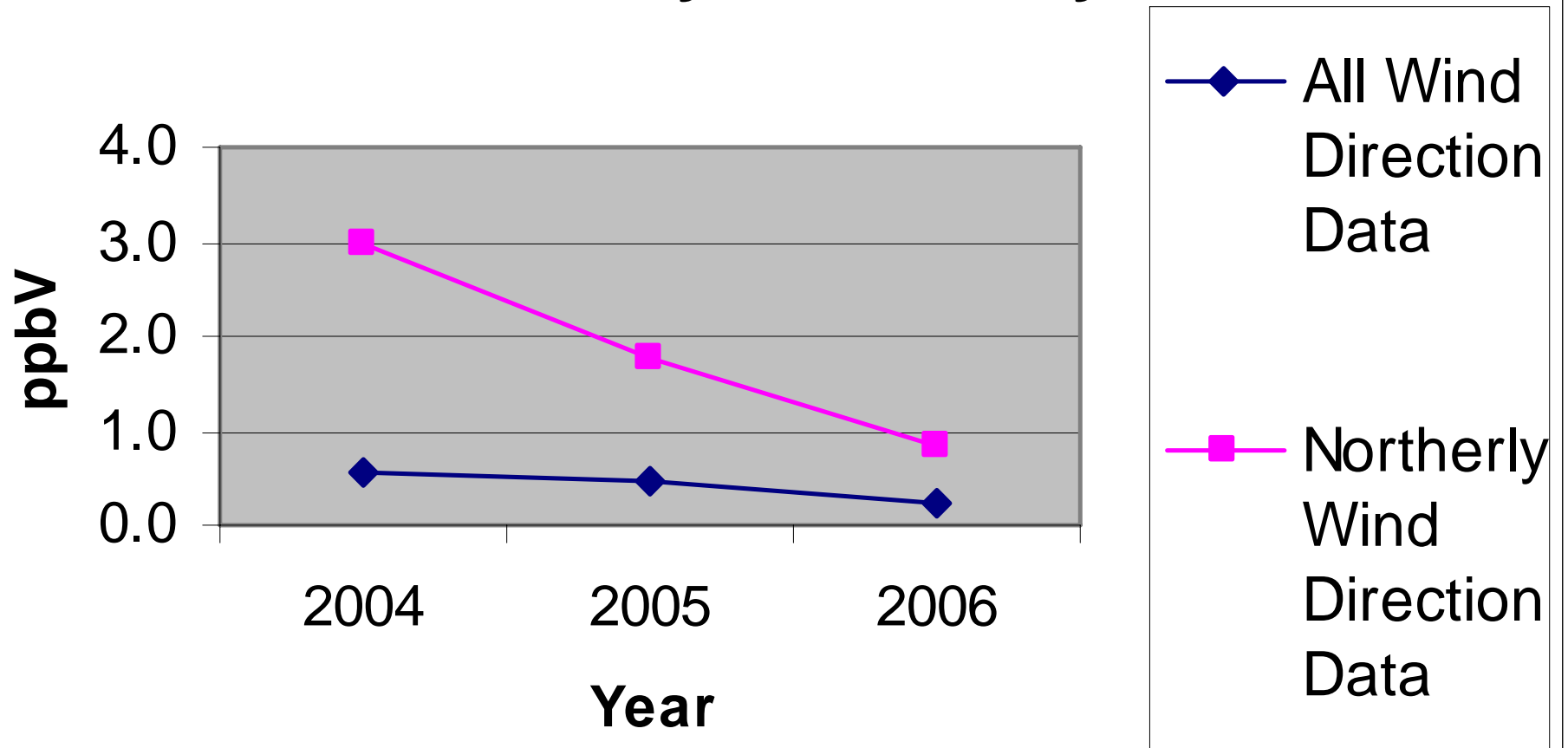
Cesar Chavez High School Monitor

- TPC is located approximately 2/3 of a mile North of the Cesar Chavez High School Monitor.
- The Cesar Chavez High School Monitor has utilized an Automated Gas Chromatograph since April 2004.

Cesar Chavez High School 1,3-Butadiene Annual Averages



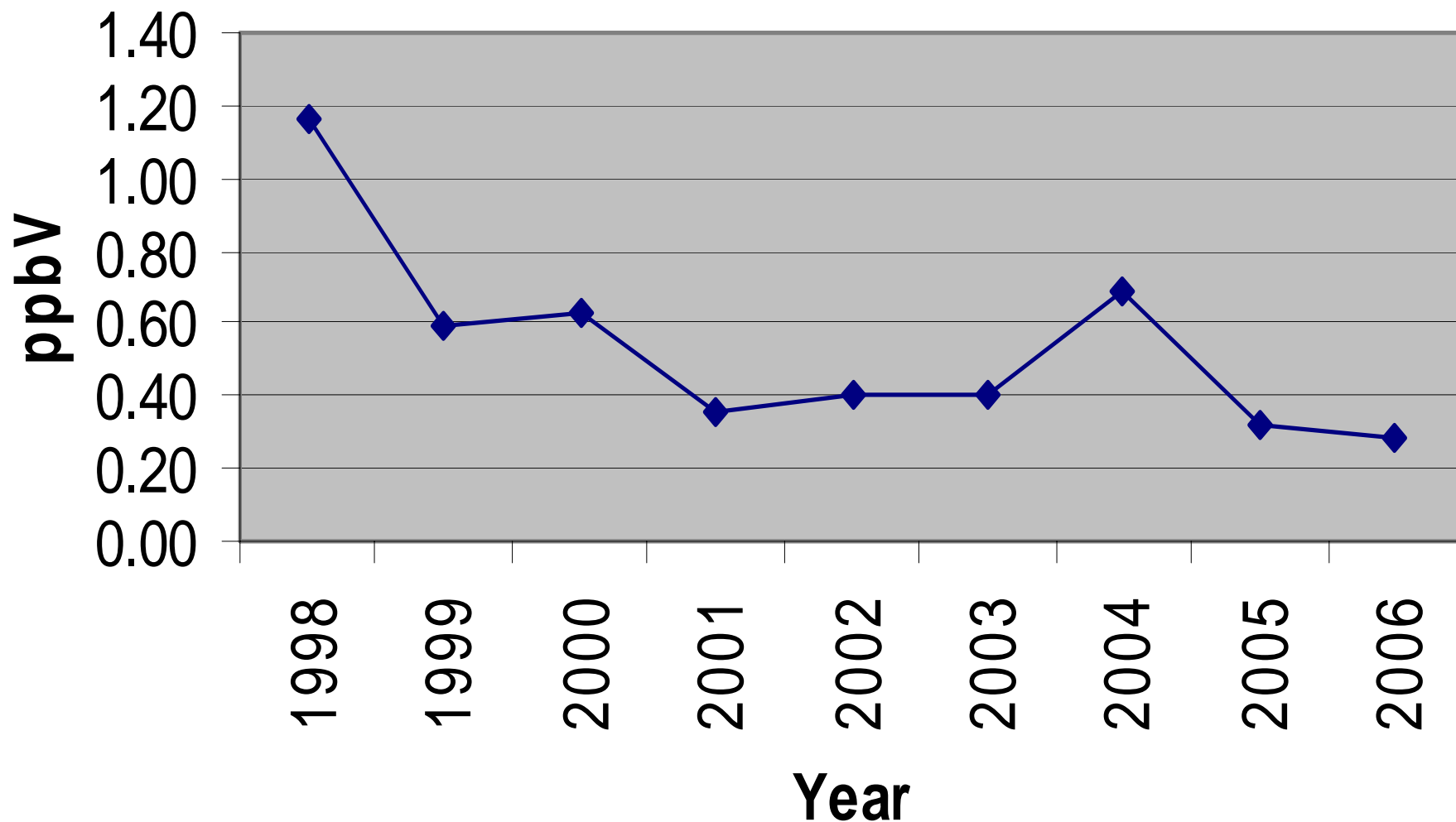
Cesar Chavez High School 1,3- Butadiene Annual Averages All Wind Directions Compared to Northerly Winds Only



Clinton Monitor

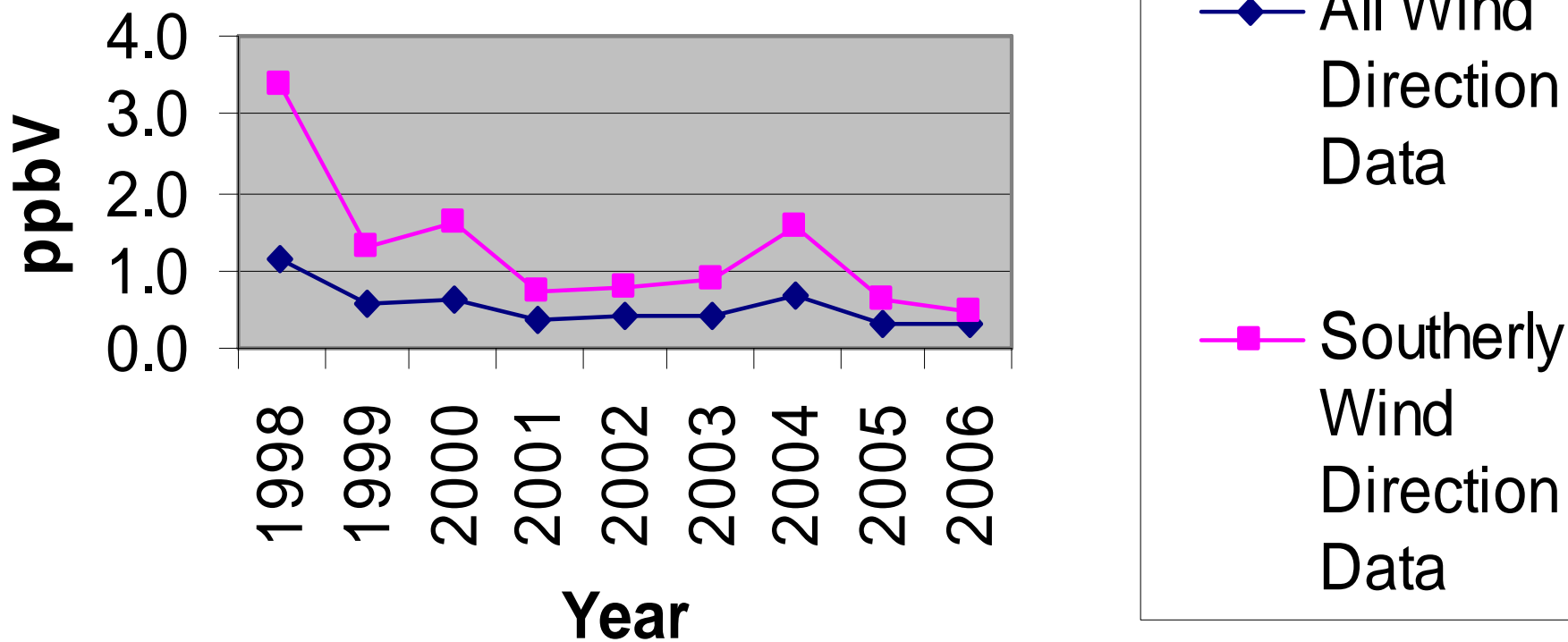
- TPC is located approximately 2 ¼ miles South of the Clinton Monitor.
- The Clinton Monitor has utilized an Automated Gas Chromatograph since before 1998.

Clinton 1,3-Butadiene Annual Averages



Clinton 1,3-Butadiene Annual Averages

All Wind Directions Compared to Southerly Winds Only



Conclusions

- The City began working with TPC on butadiene reductions in February 2005, followed by the TCEQ in the Spring of 2005, resulting in 1,3-Butadiene (BD) emissions reduction agreements with TPC in December of 2005.
- The annual BD concentrations have decreased significantly since 2004. Two major emissions events at TPC caused the improvements from 2005 to 2006 to be less significant.
- The difference between the annual BD concentrations at each site and the annual BD concentrations when the wind blows from the direction of TPC has decreased from 2004 to 2006, indicating that the BD impact from TPC has decreased from 2004 to 2006.